



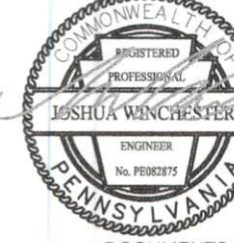






 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 NC BUILDING CODE (2015 IBC)</p>	  <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2021 SC BUILDING CODE (2021 IBC)</p>				
 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 VA CONSTRUCTION CODE (2018 IBC)</p>					
 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC</p>	 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2012 IBC</p>				
 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC</p>	 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC</p>				
<table border="1"> <tr> <td data-bbox="305 1621 678 1717">  <p><b>TAYLOR &amp; VIOLA</b> STRUCTURAL ENGINEERS P.O.B. 2616 HICKORY NORTH CAROLINA TEL: 828-328-6331 FAX: 828-322-1801 WWW.TAYLORVIOLA.COM</p> </td> <td data-bbox="695 1621 1068 1717"> <p><b>FRONTLINE STEEL STRUCTURES, LLC</b> MT. AIRY, NORTH CAROLINA</p> </td> <td data-bbox="1084 1610 1190 1728"> <p><b>DRAWN BY:</b> BKS</p> <p><b>DATE:</b> 2023.05.12</p> </td> <td data-bbox="1206 1610 1312 1728"> <p><b>PROJECT NO:</b> MISC</p> <p><b>SHEET NO:</b> 81</p> </td> </tr> </table>		 <p><b>TAYLOR &amp; VIOLA</b> STRUCTURAL ENGINEERS P.O.B. 2616 HICKORY NORTH CAROLINA TEL: 828-328-6331 FAX: 828-322-1801 WWW.TAYLORVIOLA.COM</p>	<p><b>FRONTLINE STEEL STRUCTURES, LLC</b> MT. AIRY, NORTH CAROLINA</p>	<p><b>DRAWN BY:</b> BKS</p> <p><b>DATE:</b> 2023.05.12</p>	<p><b>PROJECT NO:</b> MISC</p> <p><b>SHEET NO:</b> 81</p>
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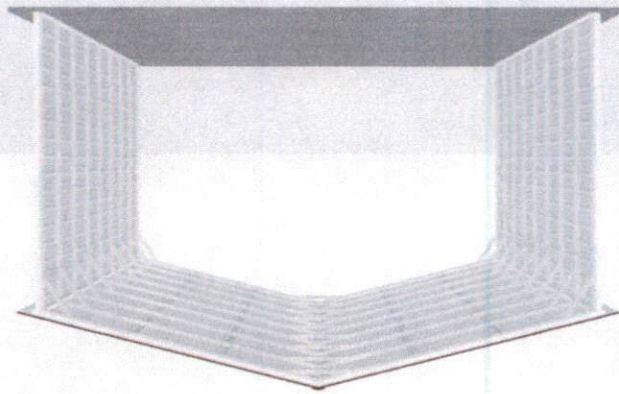
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 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 IBC</p>	 <p>DOCUMENTS DESIGNED AND DRAWN TO MEET THE 2018 KENTUCKY BUILDING CODE (2015 IBC)</p>				
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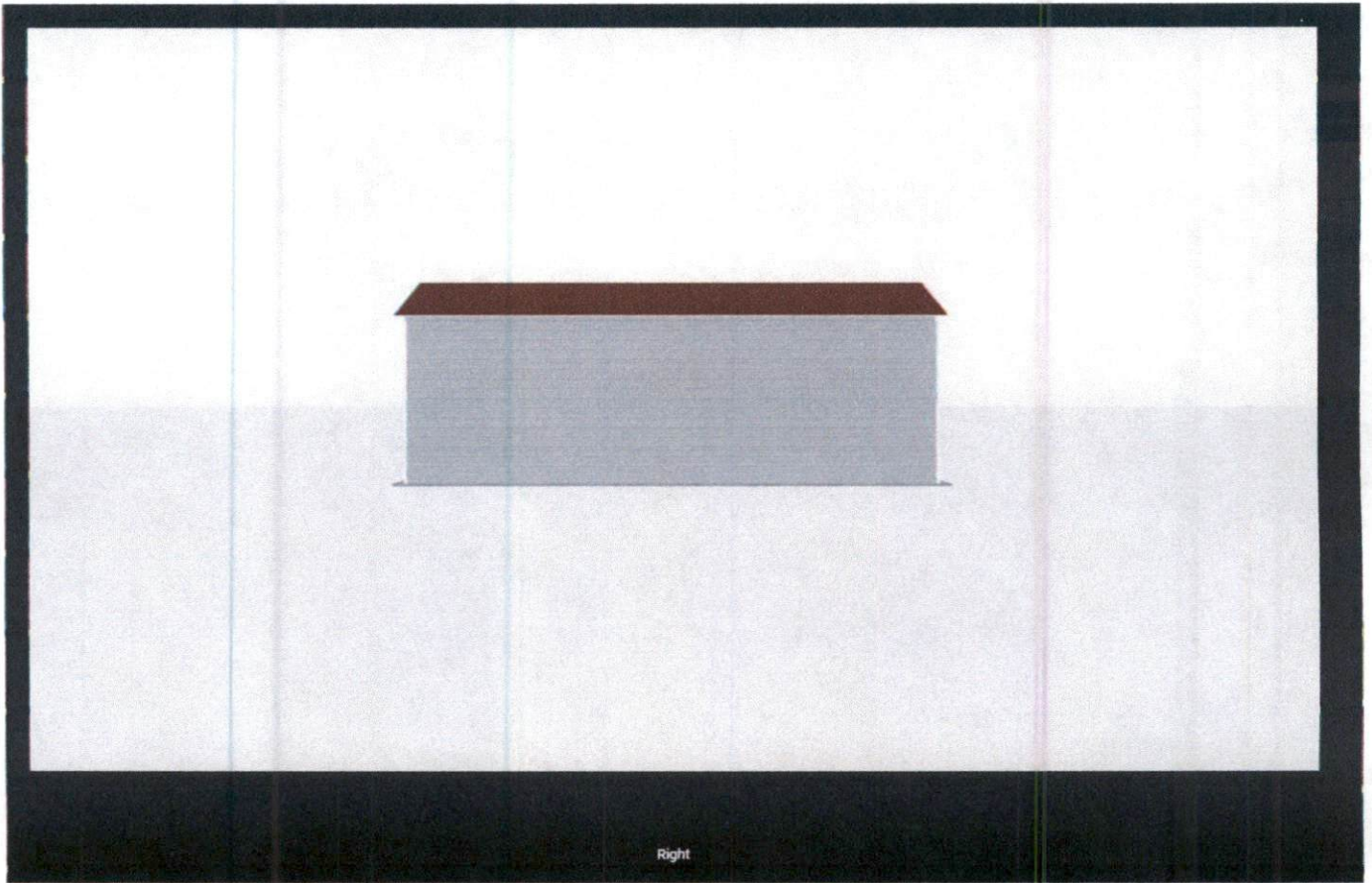
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*Charles E. Whitehead*

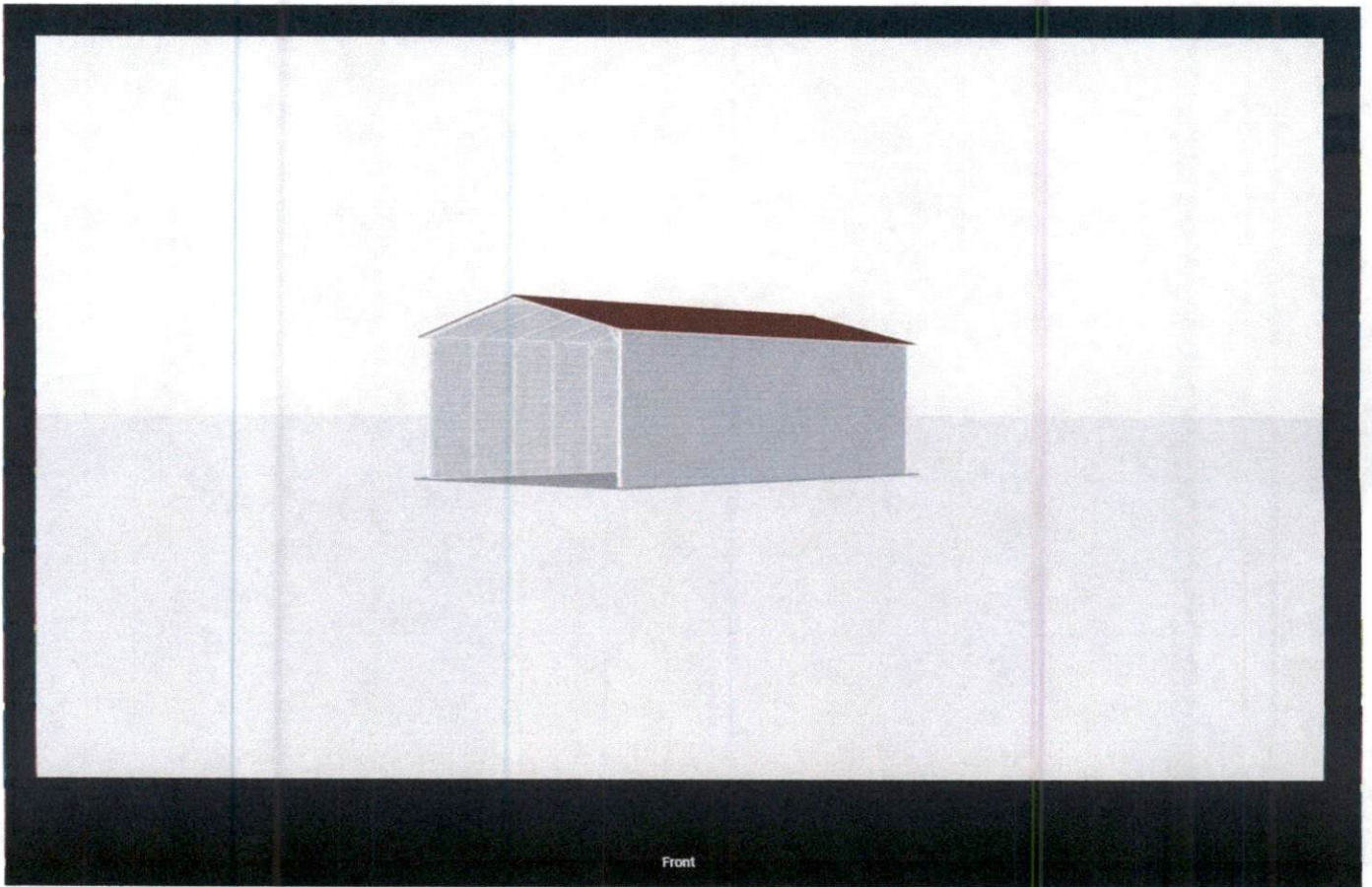
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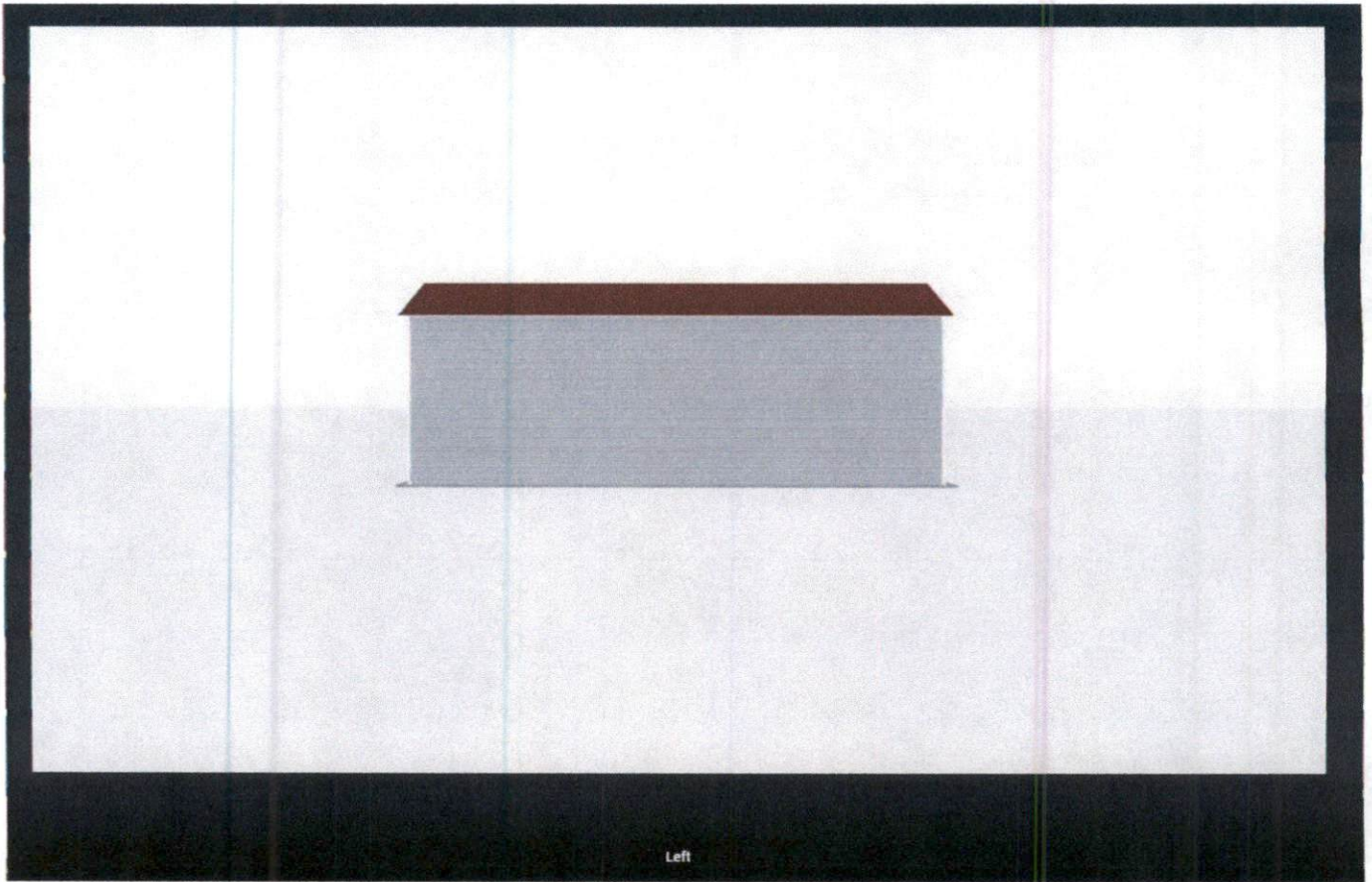




*Charles E. Whitehead*



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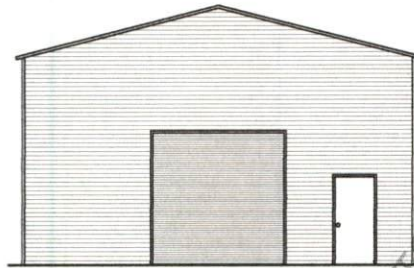


**AUTHORIZED USER:**

CHARLES WHITEHEAD  
732 NEILLS CREEK RD  
LILLINGTON, NC 27546

**BUILDING SIZE:**

24'W X 40'L X 13'H



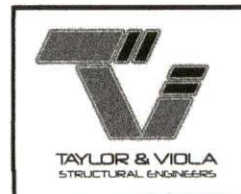
**ENCLOSED GABLE END BUILDING**

**MAXIMUM 30'-0" WIDE X 16'-0" EAVE HEIGHT WITH BOX FRAME / 135 M.P.H. WIND ZONE - 30 P.S.F. SNOW LOAD**

**FOR:**

FRONTLINE STEEL STRUCTURES, LLC  
MT. AIRY, NORTH CAROLINA

ISSUE DATE: MAY 12, 2023



**JCMT Associates, LLC**  
211 Stone Drive, Pilot Mountain, NC 27041  
336-399-6277

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DESIGN LOADS:

IMPORTANCE FACTORS      WIND                      (1w) 1.00  
    SNOW                      (1a) 1.00  
    SEISMIC                      (1e) 1.00

DEAD LOADS                      ROOF                      13      PSF  
    ROOF COLLATERAL                      0      PSF

LIVE LOADS                      ROOF                      20      PSF

GROUND SNOW LOAD:                      30      PSF

GROUND LOAD:                      BASIC WIND SPEED      V 135      mph (ASCE 7-16)      \*DRIFT LOAD HAS NOT  
    EXPOSURE CATEGORY      B                      BEEN CALCULATED

SEISMIC DESIGN CATEGORY A

COMPLIANCE WITH SECTION 1616.4?      ☒ NO      ☐ YES

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:

OCCUPANCY CATEGORY      I / II

SPECTRAL RESPONSE ACCELERATION      S<sub>0</sub> 20.5 %g      S<sub>1</sub> 8.8 %g

SITE CLASSIFICATION      D      ☐ FIELD TEST      ☒ PRESUMPTIVE      ☐ HISTORICAL DATA

BASIC STRUCTURAL SYSTEM (CHECK ONE)

☐ BEARING WALL                      ☐ DUAL W/ SPECTRAL MOMENT FRAME  
☒ BUILDING FRAME                      ☐ DUAL W/ INTERMEDIATE R/C OR SPECIAL STEEL  
☐ MOMENT FRAME                      ☐ INVERTED PENDULUM

ANALYSIS PROCEDURE      ☐ SIMPLIFIED      ☒ EQUIVALANT LATERAL FORCE      ☐ MODAL

LATERAL DESIGN CONTROL?      ☐ EARTHQUAKE      ☒ WIND

SOIL BEARING CAPACITIES:

PRESUMPTIVE BEARING CAPACITIES:      2,000      PSF

GENERAL NOTES:

1. MAX FRAME SPACING SHALL BE 60"oc UNLESS NOTED OTHERWISE.
2. MAX. END-WALL COLUMN SPACING SHALL BE 60"oc UNLESS NOTED OTHERWISE.
3. TUBE MATERIAL SHALL BE 2-1/2" x 2-1/2" x 14 GA. 50 KSI MIN. UNLESS NOTED OTHERWISE.
4. ALL FASTENERS SHALL BE #12 SELF TAPPING UNLESS NOTED OTHERWISE.
5. 2,000 PSF ASSUMED BEARING CAPACITY UNLESS NOTED OTHERWISE.



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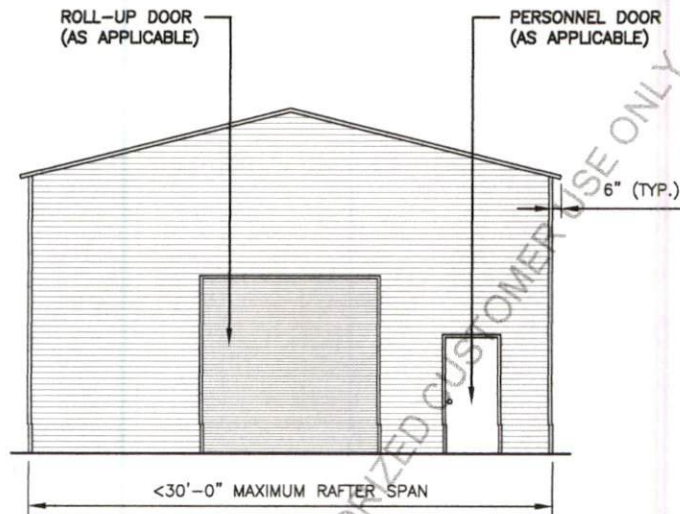
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TYPICAL END ELEVATION - VERTICAL ROOF



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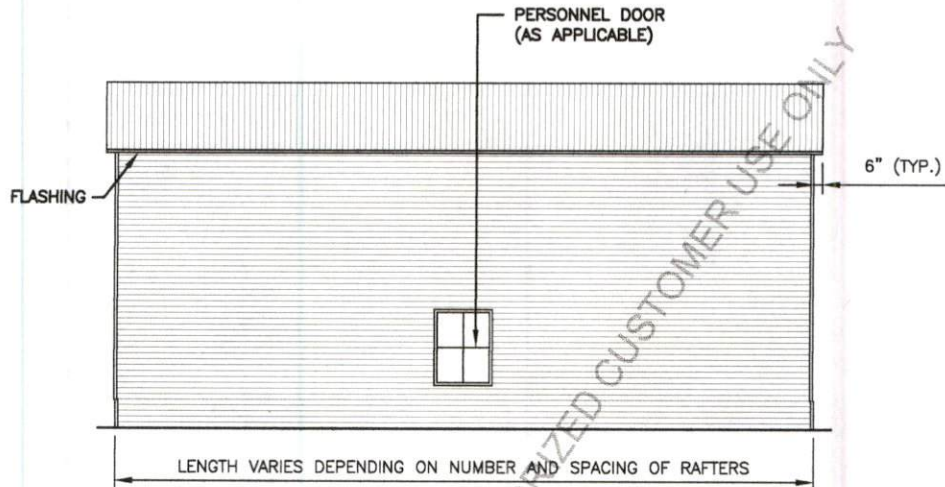
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**S4**

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TYPICAL SIDE ELEVATION - VERTICAL ROOF



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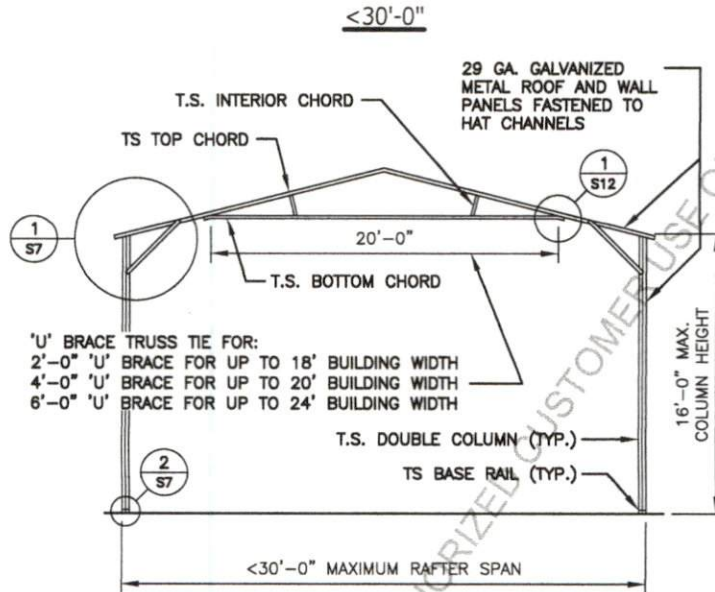
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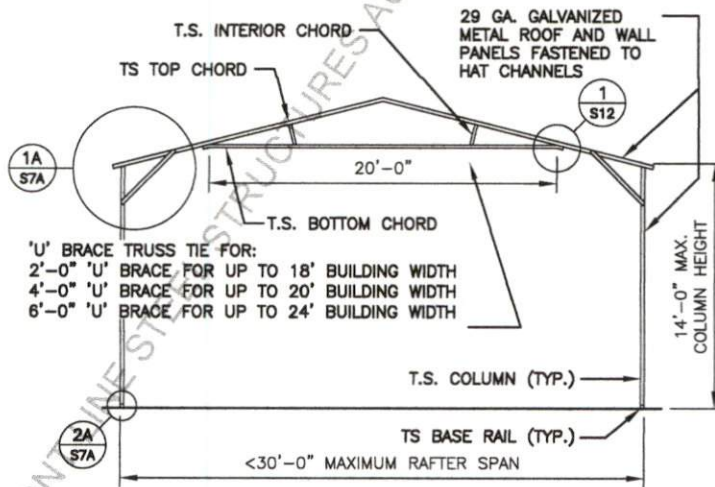
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TYPICAL RAFTER / COLUMN FRAME SECTION



TYPICAL RAFTER / COLUMN FRAME SECTION



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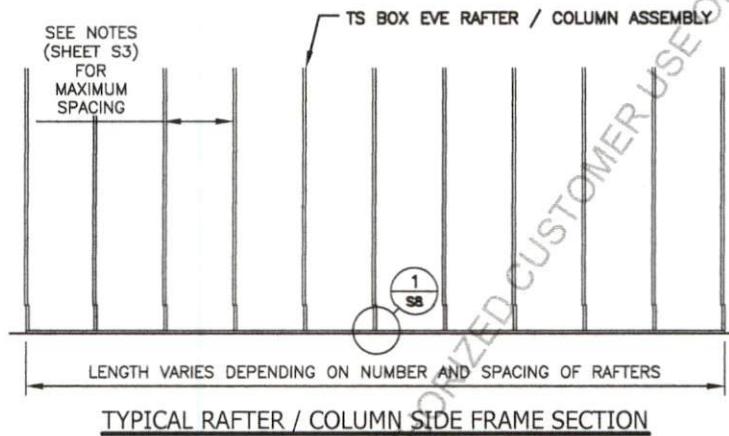
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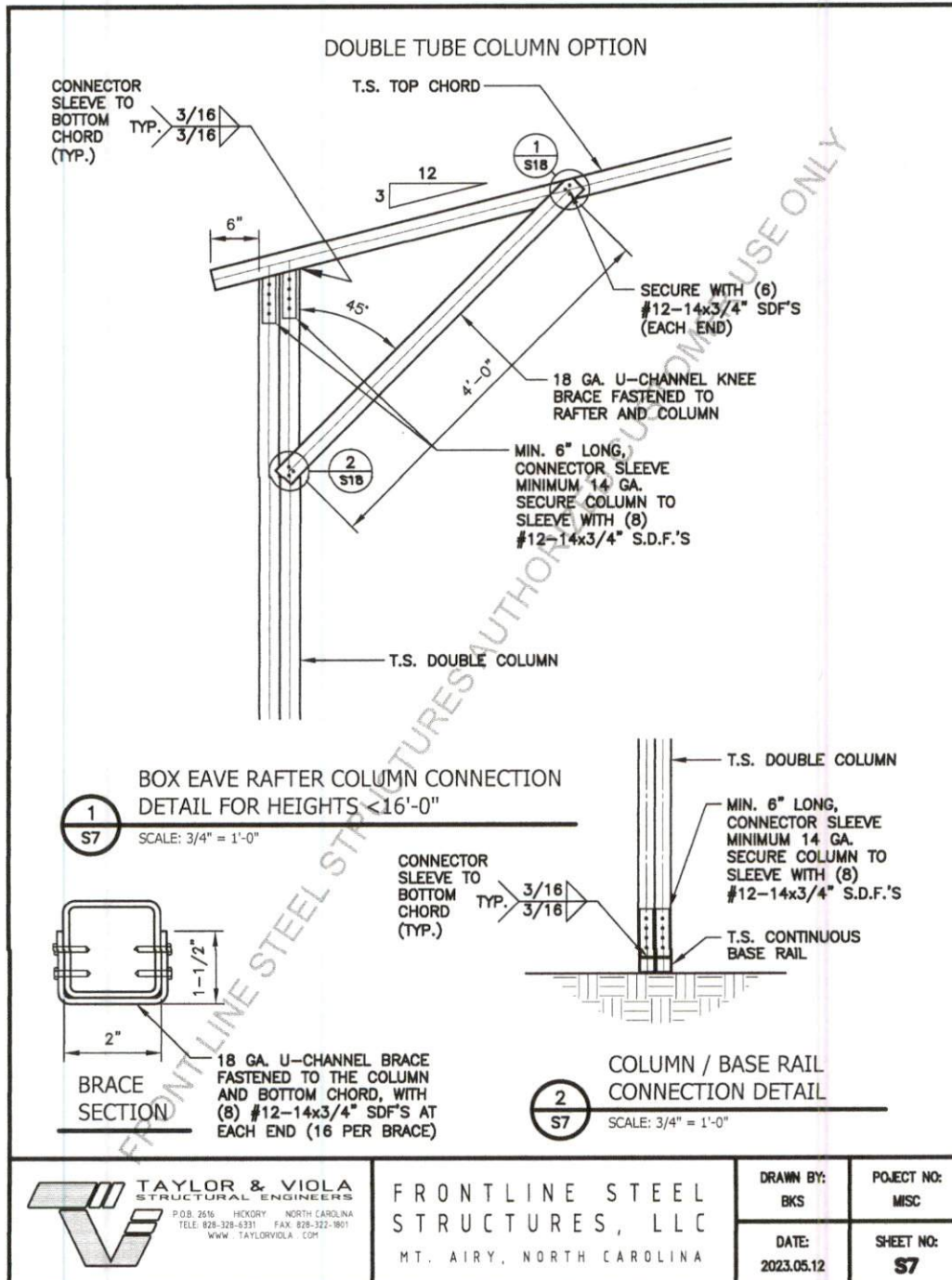
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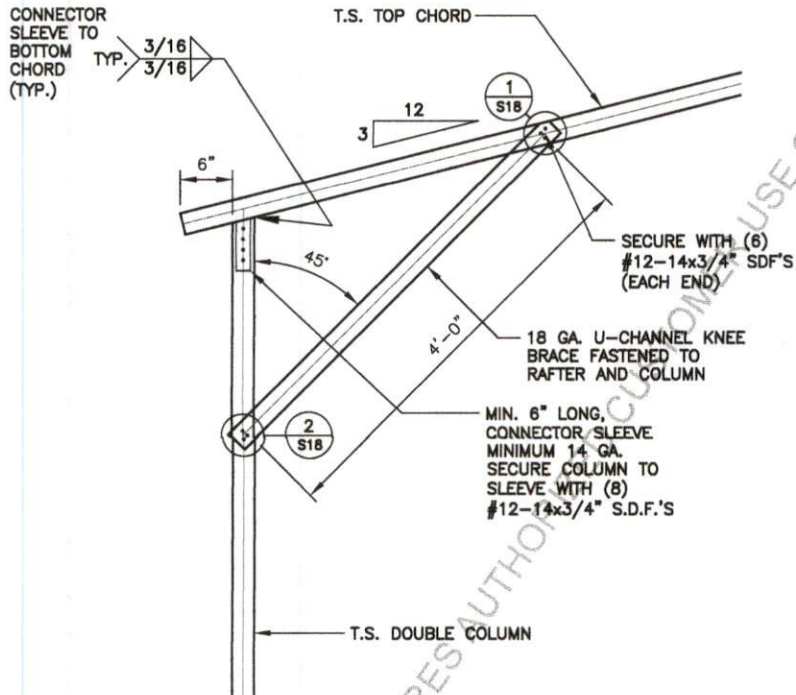
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**S8**

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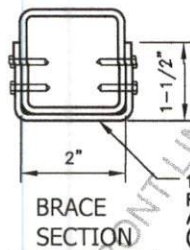
# SINGLE TUBE COLUMN OPTION



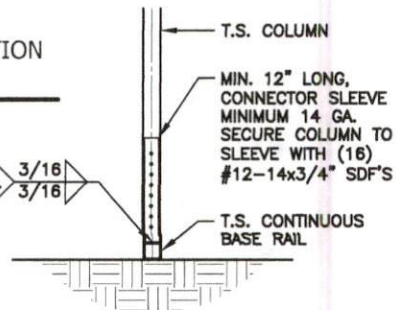
## BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS <14'-0"

1A  
S7A

SCALE: 3/4" = 1'-0"



CONNECTOR SLEEVE TO BOTTOM CHORD (TYP.)  $\frac{3}{16}$   $\frac{3}{16}$



## COLUMN / BASE RAIL CONNECTION DETAIL

2A  
S7A

SCALE: 3/4" = 1'-0"



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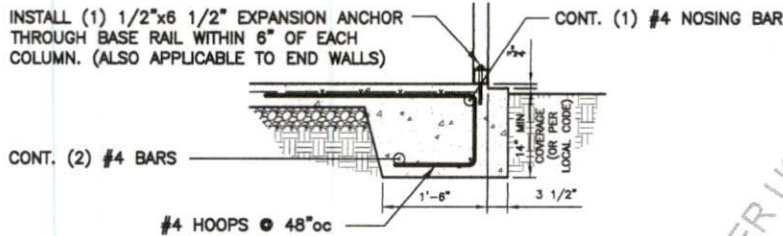
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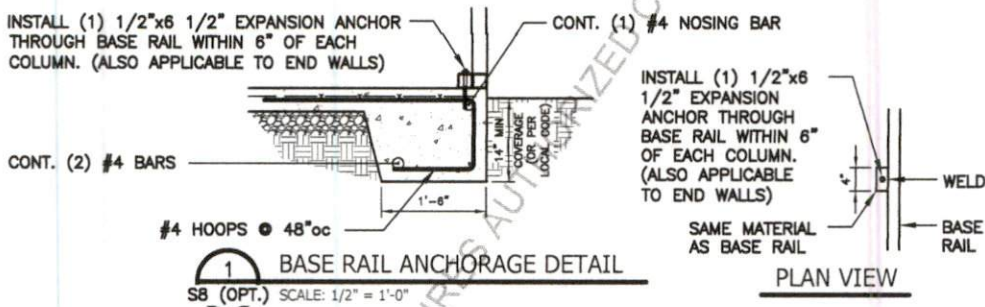
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S7A

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## BASE RAIL ANCHORAGE



1  
S8 BASE RAIL ANCHORAGE DETAIL  
SCALE: 1/2" = 1'-0"



### GENERAL NOTES:

ALL CONCRETE MONOLITHIC SLAB DESIGN BASED ON MINIMUM SOIL BEARING CAPACITY OF 2,000 PSF

### CONCRETE:

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS

### COVER OVER REINFORCING STEEL:

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318: 3" IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH AND WEATHER AND 1-1/2" ELSEWHERE.

### REINFORCING STEEL:

THE TURNDOWN REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM A185 OR FIBERGLASS FIBER REINFORCEMENT.

REINFORCEMENT MAT BE BENT IN THE SHOP OF THE FIELD PROVIDED:

1. REINFORCEMENT IS BENT COLD.
2. THE DIAMETER OF THE BEND, MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS.
3. REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT.



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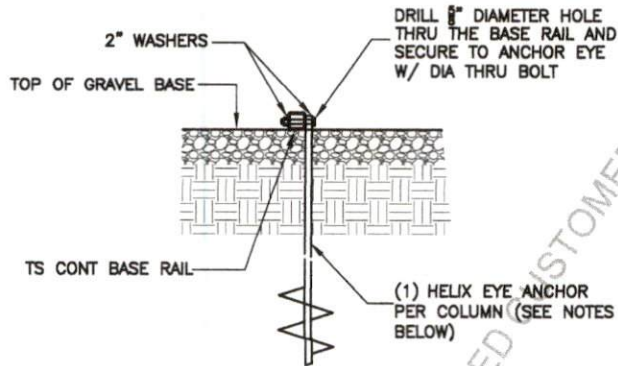
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# BASE RAIL ANCHORAGE



## BASE RAIL ANCHORAGE DETAIL

SCALE: 3/4" = 1'-0"

**HELIX EMBEDMENT INFORMATION:**  
 FOR VERY DENSE OR CEMENTED SANDS, COARSE GRAVEL, COBBLES, CALICHE, PRELOADED SILTS AND CLAYS, USE MIN (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH 50" EMBEDMENT  
 FOR CORAL, USE MIN (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH 50" EMBEDMENT  
 FOR MED DENSE COARSE SANDS, SANDY GRAVEL, VERY STIFF SILTS, AND CLAYS, USE MIN (2) 4" HELICES WITH MINIMUM 30" EMBEDMENT OR SINGLE 6" HELIX WITH 50" EMBEDMENT  
 FOR LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, USE MIN (2) 6" HELICES WITH MINIMUM 50" EMBEDMENT  
 FOR VERY LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND SILTS AND ALLUVIAL FILL, USE MIN (2) 8" HELICES WITH MINIMUM 60" EMBEDMENT



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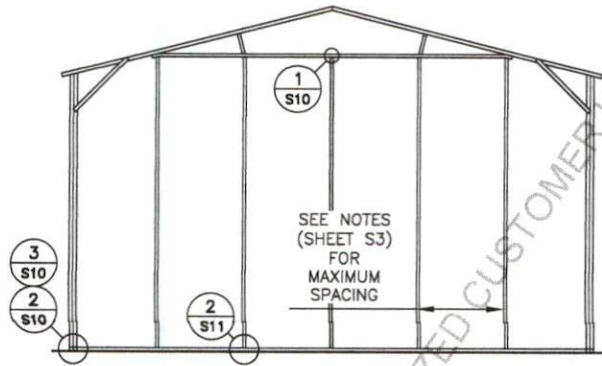
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TYPICAL END WALL FRAMING SECTION



TYPICAL END WALL FRAMING SECTION



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